

## SEQUENCE LISTING

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<140> Unknown

<141> 2002-10-30

<150> PCT/US02/27836

<151> 2001-08-30

<160> 132

<170> PatentIn version 3.1

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Arg Arg Ala Gly Gly

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His Gly Gly Val Gly

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35 40 45

Arg Val Glu Ile Ile Ala Asn Asp Gln Gly Asn Arg Ile Thr Pro Ser  
50 55 60

Tyr Val Ala Phe Thr Pro Glu Gly Glu Arg Leu Ile Gly Asp Ala Ala  
65 70 75 80

Lys Asn Gln Leu Thr Ser Asn Pro Glu Asn Thr Val Phe Asp Ala Lys  
85 90 95

Arg Leu Ile Gly Arg Thr Trp Asn Asp Pro Ser Val Gln Gln Asp Ile  
100 105 110

Lys Phe Leu Pro Phe Lys Val Val Glu Lys Lys Thr Lys Pro Tyr Ile  
115 120 125

Gln Val Asp Ile Gly Gly Gly Gln Thr Lys Thr Phe Ala Pro Glu Glu  
130 135 140

Ile Ser Ala Met Val Leu Thr Lys Met Lys Glu Thr Ala Glu Ala Tyr  
145 150 155 160

Leu Gly Lys Lys Val Thr His Ala Val Val Thr Val Pro Ala Tyr Phe  
165 170 175

Asn Asp Ala Gln Arg Gln Ala Thr Lys Asp Ala Gly Thr Ile Ala Gly  
180 185 190

Leu Asn Val Met Arg Ile Ile Asn Glu Pro Thr Ala Ala Ala Ile Ala  
195 200 205

Tyr Gly Leu Asp Lys Arg Glu Gly Glu Lys Asn Ile Leu Val Phe Asp  
210 215 220

Leu Gly Gly Gly Thr Phe Asp Val Ser Leu Leu Thr Ile Asp Asn Gly  
225 230 235 240

Val Phe Glu Val Val Ala Thr Asn Gly Asp Thr His Leu Gly Gly Glu  
245 250 255

Asp Phe Asp Gln Arg Val Met Glu His Phe Ile Lys Leu Tyr Lys Lys  
260 265 270

Lys Thr Gly Lys Asp Val Arg Lys Asp Asn Arg Ala Val Gln Lys Leu  
275 280 285

Arg Arg Glu Val Glu Lys Ala Lys Arg Ala Leu Ser Ser Gln His Gln  
290 295 300

Ala Arg Ile Glu Ile Glu Ser Phe Tyr Glu Gly Glu Asp Phe Ser Glu  
305 310 315 320

Thr Leu Thr Arg Ala Lys Phe Glu Glu Leu Asn Met Asp Leu Phe Arg  
325 330 335

Ser Thr Met Lys Pro Val Gln Lys Val Leu Glu Asp Ser Asp Leu Lys  
340 345 350

Lys Ser Asp Ile Asp Glu Ile Val Leu Val Gly Gly Ser Thr Arg Ile  
355 360 365

Pro Lys Ile Gln Gln Leu Val Lys Glu Phe Phe Asn Gly Lys Glu Pro  
370 375 380

Ser Arg Gly Ile Asn Pro Asp Glu Ala Val Ala Tyr Gly Ala Ala Val  
385 390 395 400

Gln Ala Gly Val Leu Ser Gly Asp Gln Asp Thr Gly Asp Leu Val Leu  
405 410 415

Leu Asp Val Cys Pro Leu Thr Leu Gly Ile Glu Thr Val Gly Gly Val  
420 425 430

Met Thr Lys Leu Ile Pro Arg Asn Thr Val Val Pro Thr Lys Lys Ser  
435 440 445

Gln Ile Phe Ser Thr Ala Ser Asp Asn Gln Pro Thr Val Thr Ile Lys  
450 455 460

Val Tyr Glu Gly Glu Arg Pro Leu Thr Lys Asp Asn His Leu Leu Gly  
465 470 475 480

Thr Phe Asp Leu Thr Gly Ile Pro Pro Ala Pro Arg Gly Val Pro Gln

485 490 495

Ile Glu Val Thr Phe Glu Ile Asp Val Asn Gly Ile Leu Arg Val Thr  
500 505 510

Ala Glu Asp Lys Gly Thr Gly Asn Lys Asn Lys Ile Thr Ile Thr Asn  
515 520 525

Asp Gln Asn Arg Leu Thr Pro Glu Glu Ile Glu Arg Met Val Asn Asp  
530 535 540

Ala Glu Lys Phe Ala Glu Glu Asp Lys Lys Leu Lys Glu Arg Ile Asp  
545 550 555 560

Thr Arg Asn Glu Leu Glu Ser Tyr Ala Tyr Ser Leu Lys Asn Gln Ile  
565 570 575

Gly Asp Lys Glu Lys Leu Gly Gly Lys Leu Ser Ser Glu Asp Lys Glu  
580 585 590

Thr Met Glu Lys Ala Val Glu Glu Lys Ile Glu Trp Leu Glu Ser His  
595 600 605

Gln Asp Ala Asp Ile Glu Asp Phe Lys Ala Lys Lys Lys Glu Leu Glu  
610 615 620

Glu Ile Val Gln Pro Ile Ile Ser Lys Leu Tyr Gly Ser Ala Gly Pro  
625 630 635 640

Pro Pro Thr Gly Glu Glu Asp Thr Ala Glu Lys Asp Glu Leu  
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&lt;211&gt; 8

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&lt;213&gt; Artificial

&lt;220&gt;



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Cys Ser Ala Ser Asp Leu Ser Cys  
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Cys Gln Asn Gln Tyr Pro Glu Cys  
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Leu Gly Cys Met Ala Ser Met Leu Arg Glu Phe Glu Gly Ala Thr His

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Ala Cys Thr Gln

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Gln Cys Gly Asn  
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Tyr Cys Phe Lys  
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Gly Thr Cys Pro Arg Gln Phe Phe His Met Gln Glu Phe Trp Pro Ser

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Asp Cys Ser Arg  
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Asp Arg Cys Val Leu Val Arg Pro Glu Phe Gly Arg Gly Asp Ala Arg  
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Leu Cys His Ser  
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Glu Gly Cys Ser Asp Ile Met Asn Thr Ala Ala Glu Arg Val Thr Gly  
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Asp Cys Ser Tyr  
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Val Phe Cys Cys Gly Ser Tyr Cys Gly Gly Val Glu Met Leu Ala Ser  
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Gly Cys Ser Arg  
20

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Lys Cys Arg Gln  
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Ala Cys Ile Ser  
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Ala Cys Asp Arg  
20

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Met Cys Ile Ala  
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Lys Cys Ser Asp  
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Thr Cys Asn Ser  
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Arg Cys Leu Lys  
20

<210> 100  
<211> 20  
<212> PRT  
<213> Artificial

<220>  
<223> Synthetic Peptide

<400> 100

Ala Arg Cys Arg Glu Asp Thr Gly Phe Met Gly Leu Gly Ser Ala Asn  
1 5 10 15

Ile Cys Thr Asp  
20

<210> 101  
<211> 20  
<212> PRT  
<213> Artificial

&lt;220&gt;

&lt;223&gt; Synthetic Peptide

&lt;400&gt; 101

Arg Thr Cys Glu Glu Val Arg Asn Arg Ala Leu Glu Glu Leu Thr Asn  
1 5 10 15

Phe Cys Pro Tyr  
20

&lt;210&gt; 102

&lt;211&gt; 20

&lt;212&gt; PRT

&lt;213&gt; Artificial

&lt;220&gt;

&lt;223&gt; Synthetic Peptide

&lt;400&gt; 102

Arg Thr Cys Gln Val Arg Ser Asn Asn Ile Ser Pro Arg Met Ala Leu  
1 5 10 15

Ala Cys Val Thr  
20

&lt;210&gt; 103

&lt;211&gt; 20

&lt;212&gt; PRT

&lt;213&gt; Artificial

&lt;220&gt;

&lt;223&gt; Synthetic Peptide

&lt;400&gt; 103

Arg Ser Cys Val Asn Ser Asp Thr Gly Val Leu Gln Arg Gly Ala Pro  
1 5 10 15

Ser Cys Leu Phe  
20

<210> 104  
<211> 20  
<212> PRT  
<213> Artificial

<220>  
<223> Synthetic Peptide

<400> 104

Arg Gly Cys Trp Arg Asp Ser Thr Ala Trp His Val Ser Tyr Pro Val  
1 5 10 15

Glu Cys Leu Ala  
20

<210> 105  
<211> 20  
<212> PRT  
<213> Artificial

<220>  
<223> Synthetic Peptide

<400> 105

Asn Arg Cys Met Pro Gly Phe Leu Asp Asp Ala Asp Ser Ala Ala Ser  
1 5 10 15

Pro Cys Gly Ser  
20

<210> 106  
<211> 20  
<212> PRT  
<213> Artificial

<220>  
<223> Synthetic Peptide

<400> 106

Asn Gln Cys Ser Ser Leu Leu Thr Tyr Gln Gly Trp Lys Arg Thr Lys  
1 5 10 15

Asp Cys Ile Pro  
20

<210> 107  
<211> 20  
<212> PRT  
<213> Artificial

<220>  
<223> Synthetic Peptide

<400> 107

Asn Asp Cys Ser Ala His Ala Gln Pro Gly Trp Asp Glu Val Pro Pro  
1 5 10 15

Met Cys Asn Gln  
20

<210> 108  
<211> 20  
<212> PRT  
<213> Artificial

<220>  
<223> Synthetic Peptide

<400> 108

Asn Asn Cys Pro Val Glu Gly Ser Gln Gln Asn Tyr Ser Gly Ala Thr  
1 5 10 15

Trp Cys Arg Ala  
20

<210> 109  
<211> 20  
<212> PRT  
<213> Artificial

<220>  
<223> Synthetic Peptide

&lt;400&gt; 109

Thr Thr Cys Asn Lys Ser Met Ser Ser Gln Pro Met Arg Asp Ser Arg  
1 5 10 15

Glu Cys His Arg  
20

&lt;210&gt; 110

&lt;211&gt; 20

&lt;212&gt; PRT

&lt;213&gt; Artificial

&lt;220&gt;

&lt;223&gt; Synthetic Peptide

&lt;400&gt; 110

Thr Ser Cys Val Arg Thr Gly His Asp Glu Asn Leu Leu Lys Ala Ala  
1 5 10 15

Tyr Cys Ser Ser  
20

&lt;210&gt; 111

&lt;211&gt; 20

&lt;212&gt; PRT

&lt;213&gt; Artificial

&lt;220&gt;

&lt;223&gt; Synthetic Peptide

&lt;400&gt; 111

Thr Glu Cys Arg Gly Ala Ser Ser Gly Ser Val Ser Gly Ala Ala Thr  
1 5 10 15

Asp Cys Arg Asp  
20

&lt;210&gt; 112

&lt;211&gt; 20

<212> PRT  
<213> Artificial

<220>  
<223> Synthetic Peptide

<400> 112

Thr Leu Cys Pro Pro Ala Ser Met Gly Leu Gly Arg Glu Lys Pro Arg  
1 5 10 15

Leu Cys Ser Val  
20

<210> 113  
<211> 20  
<212> PRT  
<213> Artificial

<220>  
<223> Synthetic Peptide

<400> 113

Thr Leu Cys Arg Ser Leu Glu His Glu Val Gly Leu Phe Lys Pro Arg  
1 5 10 15

Glu Cys Pro Phe  
20

<210> 114  
<211> 20  
<212> PRT  
<213> Artificial

<220>  
<223> Synthetic Peptide

<400> 114

Leu Arg Cys Pro Leu Glu Val Asp Arg Pro Asn Arg Asp Pro Ala Phe  
1 5 10 15

Leu Cys Ser Gln

20

<210> 115  
<211> 20  
<212> PRT  
<213> Artificial

<220>  
<223> Synthetic Peptide

&lt;400&gt; 115

Leu Gly Cys Asn Lys Gly Arg Tyr Trp Leu Ser Thr Arg Leu Ser Val  
1           5           10           15

Ser Cys Ala Leu  
20

<210> 116  
<211> 20  
<212> PRT  
<213> Artificial

<220>  
<223> Synthetic Peptide

&lt;400&gt; 116

Val Ala Cys Asp Ile Ser Ala Val Glu Arg Leu Pro Ala Ser Ala Arg  
1           5           10           15

Ser Cys Lys Thr  
20

<210> 117  
<211> 20  
<212> PRT  
<213> Artificial

<220>  
<223> Synthetic Peptide

&lt;400&gt; 117



Val Val Cys Phe Met Glu Arg Gln Met Gly Thr Asp Val Val Ser Pro  
1 5 10 15

Met Cys Val Asn  
20

<210> 118  
<211> 20  
<212> PRT  
<213> Artificial

<220>  
<223> Synthetic Peptide

<400> 118

Val Glu Cys Val Met Ala Ser Ala Ser Thr Asp Gly Thr Ala Ala His  
1 5 10 15

Pro Cys Lys Pro  
20

<210> 119  
<211> 20  
<212> PRT  
<213> Artificial

<220>  
<223> Synthetic Peptide

<400> 119

Val Arg Cys Asn Glu Ala Gln Leu Gln Asp Ser Gly Thr Val Pro His  
1 5 10 15

Pro Cys Leu Arg  
20

<210> 120  
<211> 20  
<212> PRT  
<213> Artificial

&lt;220&gt;

&lt;223&gt; Synthetic Peptide

&lt;400&gt; 120

Pro Asn Cys Asp Leu Asp Asp Ile Val Leu Asn Pro Tyr Thr Ala Gly  
1 5 10 15

Pro Cys Gly Thr  
20

&lt;210&gt; 121

&lt;211&gt; 20

&lt;212&gt; PRT

&lt;213&gt; Artificial

&lt;220&gt;

&lt;223&gt; Synthetic Peptide

&lt;400&gt; 121

Pro Asn Cys Tyr Ser Gly Asp Gly Glu Ile Ser Ser His Ile Pro Val  
1 5 10 15

Gln Cys Leu Met  
20

&lt;210&gt; 122

&lt;211&gt; 20

&lt;212&gt; PRT

&lt;213&gt; Artificial

&lt;220&gt;

&lt;223&gt; Synthetic Peptide

&lt;400&gt; 122

Pro Gly Cys Val Val Ser Pro Phe Ala Leu Ser Ala Gln Gly Thr Ser  
1 5 10 15

Val Cys Thr Ile  
20

<210> 123  
<211> 20  
<212> PRT  
<213> Artificial

<220>  
<223> Synthetic Peptide

<400> 123

Gly Asp Cys Glu Thr Asn Asn Val Thr Lys Val Gly Gly Ile Thr Arg  
1 5 10 15

Asn Cys Val Gly  
20

<210> 124  
<211> 20  
<212> PRT  
<213> Artificial

<220>  
<223> Synthetic Peptide

<400> 124

Gly Tyr Cys Leu Thr Val Val Gly Gly Ala Val Leu Thr Ile Ala Leu  
1 5 10 15

Leu Cys Val Thr  
20

<210> 125  
<211> 20  
<212> PRT  
<213> Artificial

<220>  
<223> Synthetic Peptide

<400> 125

Gly Pro Cys Ala Ala Thr Gly Val Asn Pro Gly Asp His Gly Ala Ala  
1 5 10 15

Val Cys Asp Gln  
20

<210> 126  
<211> 20  
<212> PRT  
<213> Artificial

<220>  
<223> Synthetic Peptide

<400> 126

Gly Asp Cys Glu Thr Asn Asn Val Thr Lys Val Gly Gly Ile Thr Arg  
1 5 10 15

Asn Cys Val Gly  
20

<210> 127  
<211> 20  
<212> PRT  
<213> Artificial

<220>  
<223> Synthetic Peptide

<400> 127

Lys Ser Cys Gly Lys Tyr Gly Leu Ile Val Gly Gln Pro Phe Ala Glu  
1 5 10 15

His Cys Pro Pro  
20

<210> 128  
<211> 20  
<212> PRT  
<213> Artificial

<220>  
<223> Synthetic Peptide

&lt;400&gt; 128

Lys Leu Cys Tyr Arg Ser Ser Ala Gly Ser Glu Leu Arg Pro Pro Glu  
1 5 10 15

Lys Cys Ala Tyr  
20

&lt;210&gt; 129

&lt;211&gt; 20

&lt;212&gt; PRT

&lt;213&gt; Artificial

&lt;220&gt;

&lt;223&gt; Synthetic Peptide

&lt;400&gt; 129

Lys Ile Cys Pro Val Thr Asn Met Trp Thr Thr Pro Ser Trp Ala His  
1 5 10 15

Lys Cys Gly Met  
20

&lt;210&gt; 130

&lt;211&gt; 29

&lt;212&gt; DNA

&lt;213&gt; Artificial

&lt;220&gt;

&lt;223&gt; Synthetic Oligonucleotide

&lt;400&gt; 130

aggctcgagg atcctcggcc gacggggct

29

&lt;210&gt; 131

&lt;211&gt; 27

&lt;212&gt; DNA

&lt;213&gt; Artificial

&lt;220&gt;

&lt;223&gt; Synthetic Oligonucleotide

&lt;400&gt; 131

aggtctagaa ttcgcccag cggcccc

27

<210> 132

<211> 9

<212> PRT

<213> Artificial

<220>

<223> Synthetic Peptide

<400> 132

Cys Val Pro Glu Leu Gly His Glu Cys  
1 5